

Amendments to the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1. (Currently Amended) A method of depositing a layer onto a microfeature workpiece, comprising:

- (a) placing a microfeature workpiece in a vapor reaction chamber;
- (b) injecting a gas into a plasma zone in the vapor reaction chamber;
- (c) generating a plasma from the gas in the plasma zone that causes an electrically conductive material to be deposited on the microfeature workpiece and a window of the vapor reaction chamber at a deposition temperature and then remove the microfeature workpiece from the vapor reaction chamber;
- (d) transforming the electrically conductive material on the window into a substantially dielectric material at a maintenance temperature of about 400°C; and

repeating the steps of (a)-(d) with the transformed dielectric material remaining on the window, wherein the deposition temperature is approximately equal to the maintenance temperature.

2. (Original) The method of claim 1 wherein the conductive material deposited on the workpiece and the window comprises a metal, and transforming the conductive material on the window into a substantially dielectric material comprises changing the metal to a metal oxide.

3. (Original) The method of claim 1 wherein the conductive material deposited on the workpiece comprises at least one of Ti, W, Cu, Al, Ni and/or Co, and transforming the conductive material into a substantially dielectric material comprises oxidizing the at least one of the Ti, W, Cu, Al, Ni and/or Co to form a metal oxide.

4. (Original) The method of claim 1 wherein the conductive material deposited on the workpiece and the window comprises a metal, and transforming the conductive material on the window into a substantially dielectric material comprises changing the metal to a metal oxide by injecting a fluid comprising oxygen into the vapor reaction chamber.

5. (Currently Amended) The method of claim 1 wherein the ~~conductive material is deposited onto the workpiece and the window at a deposition temperature and the electrically conductive material is transformed into the substantially dielectric material at a~~ maintenance temperature is of 80% to 120% of the deposition temperature.

6. (Currently Amended) The method of claim 1 wherein the ~~conductive material is deposited onto the workpiece and the window at a deposition temperature and the electrically conductive material is transformed into the substantially dielectric material at a~~ maintenance temperature is of 95% to 105% of the deposition temperature.

7. (Canceled).

8. (Currently Amended) The method of claim 1 wherein the ~~conductive material is deposited onto the workpiece and the window at a deposition temperature and the electrically conductive material is transformed into the substantially dielectric material at a~~ maintenance temperature is within approximately 50°C of the deposition temperature.

9. (Original) The method of claim 1 wherein:

the conductive material is deposited onto the workpiece in a plasma deposition process comprising flowing a first gas into the reaction chamber during one interval, terminating the flow of the first gas, flowing a second gas into the reaction chamber during another interval after terminating the flow of the first gas, and terminating the flow of the second gas, wherein the

plasma is generated from at least one of the first and second gases, and wherein the first and second gases react to form the conductive material on the workpiece and the window; and transforming the conductive material into a substantially dielectric material comprises flowing a fluid containing oxygen into the reaction chamber.

10. (Original) The method of claim 1 wherein:

the conductive material is deposited onto the workpiece in a plasma vapor deposition process comprising concurrently flowing a first gas and a second gas into the reaction chamber, generating the plasma from at least one of the first and second gases, and terminating the flow of the first and second gases; and transforming the electrically conductive material into a substantially dielectric material comprises flowing a fluid containing oxygen into the reaction chamber.

11. (Currently Amended) A method of forming a conductive layer on a microfeature workpiece, comprising:

depositing ~~an electrically conductive material~~ Titanium onto a ~~first plurality of~~ microfeature workpieces in a vapor deposition process by flowing a gas into a plasma zone in a vapor reaction chamber and transmitting an energy into the plasma zone via a window of the vapor reaction chamber, wherein the energy produces a plasma from the gas that results in a residual film of Titanium having a first transmissivity to the energy being formed on the window;

changing the residual film of Titanium to have a second transmissivity to the energy at a temperature of at least 400°C; and

depositing ~~the conductive material~~ Titanium onto a ~~second~~ additional microfeature workpiece by repeating the vapor deposition process after changing the residual film to have the second transmissivity while the changed residual film remains on the window.

12. (Canceled).

13. (Original) The method of claim 11 wherein the second transmissivity is greater than the first transmissivity.

14. (Currently Amended) The method of claim 11 wherein ~~the residual film comprises a metal and~~ changing the residual film of Titanium comprises changing the ~~metal~~ residual film of Titanium to an Titanium oxide.

15. (Currently Amended) The method of claim 11 wherein ~~the residual film on the window comprises a metal, and~~ changing the residual film of Titanium comprises changing the ~~metal~~ residual film of Titanium to a ~~metal~~ Titanium oxide by injecting a fluid comprising oxygen into the vapor reaction chamber.

16. (Original) The method of claim 11 wherein the residual film is formed on the window at a deposition temperature and the residual film is changed to have a second transmissivity greater than the first transmissivity at a maintenance temperature of approximately 80% to 120% of the deposition temperature.

17. (Original) The method of claim 11 wherein the residual film is formed on the window at a deposition temperature and the residual film is changed to have a second transmissivity greater than the first transmissivity at a maintenance temperature of approximately 95% to 105% of the deposition temperature.

18. (Previously presented) The method of claim 11 wherein the residual film is formed on the window at a deposition temperature and the residual film is changed to have a second transmissivity greater than the first transmissivity at a maintenance temperature approximately equal to the deposition temperature.

19. (Currently Amended) A method of depositing a material onto a microfeature workpiece in an Atomic Layer Deposition process, comprising:

(a) depositing an electrically conductive material onto a first microfeature workpiece in a plasma vapor deposition process by flowing a gas into a plasma zone in a vapor reaction chamber and transmitting an energy into the plasma zone via a window of the vapor reaction chamber;

(b) increasing a transmissivity to the energy of a residual film of the conductive material formed on the window during the plasma vapor deposition process at a temperature of about 400°C; and

repeating the steps of (a)-(b) with a second microfeature workpiece while the residual film remaining on the window, the residual film has the increased transmissivity.

20. (Currently Amended) The method of claim 19 wherein the residual film comprises ~~a metal~~Titanium and increasing the transmissivity of the residual film comprises changing ~~the metal~~Titanium to an Titanium oxide.

21. (Currently Amended) The method of claim 19 wherein the residual film comprises ~~a metal~~Titanium, and increasing the transmissivity of the residual film comprises changing ~~the metal~~Titanium to a ~~metal~~Titanium oxide by injecting a fluid comprising oxygen into the vapor reaction chamber.

22. (Original) The method of claim 19 wherein the residual film is formed on the window at a deposition temperature and transmissivity of the residual film is increased at a maintenance temperature of approximately 80% to 120% of the deposition temperature.

23. (Previously presented) The method of claim 19 wherein the residual film is formed on the window at a deposition temperature and the transmissivity of the residual film is increased at a maintenance temperature approximately equal to the deposition temperature.

24-38. (Canceled).